Vol. 6, Part 2. 15th February, 1937.

IMP. INST. ENT.
— LIBRARY —
16 FEB 1937
SERIAL Ex. 344 B
SEPARATE

THE

PROCEEDINGS

OF THE

ROYAL ENTOMOLOGICAL SOCIETY

OF

LONDON

Series B.

TAXONOMY

(being the continuation of Stylops)

LONDON:

PUBLISHED BY THE SOCIETY AND

SOLD AT ITS ROOMS, 41, QUEEN'S GATE, S.W.7

Price 3s. 0d.

NOTICE.

The Proceedings of the Royal Entomological Society of London are issued in three series.

Series A. General Entomology.
Series B. Taxonomy.
Series C. Journal of Meetings.

Series A. and B. are each issued in parts in an annual volume of approximately 240 pages.

Papers submitted for publication in either of these series by authors who are not Fellows of the Society may be accepted if they are communicated by a Fellow. Preference will be given to papers written in the English language, and papers of more than 8 printed pages will not normally be accepted for publication in these journals.

Whilst the Society is prepared to undertake the provision of a reasonable number of text-figures, authors are expected to supply the original drawings for such figures, and in the case of plates, half-tone, or colour-work the author is required to pay for the necessary blocks.

A uniform method is adopted for the citation of bibliographical references in the Society's publications as follows :—

Smith, A., 1936, *Proc. R. ent. Soc. Lond.* (*B*) **6** : 301–306, pl. 1.

——. 1936, *Trans. R. ent. Soc. Lond.* **84** : 901–936.

Titles of periodicals cited are to be abbreviated in the manner indicated in the *World List of Scientific Periodicals, 2nd edition* 1934.

Authors are entitled to receive 25 copies of their papers free of charge and may purchase additional copies provided that request be made before publication.

Papers offered for publication should be sent to the Secretary, Royal Entomological Society of London, at 41, *Queen's Gate, London, S.W.*7, and must be typewritten on one side of the paper only.

Series C. is issued prior to every General Meeting. It contains abstracts of exhibits to be shown and communications to be made together with the titles of papers accepted for publication.

The annual subscription to *Series A. General Entomology* is £1 4*s.* 0*d.*; *Series B. Taxonomy*, £1 4*s.* 0*d.* (single parts 3*s.* 0*d.*); and *Series C. Journal of Meetings*, 6*s.* 0*d.*

As from January 1936 the journal *Stylops* is continued as *Proceedings, Series B. Taxonomy.* Copies of volumes 1 to 4 are available at £1 16*s.* 0*d.* each, post free.

NEW AFRICAN SPECIES OF THE GENUS *CALLISTOMIMUS* (COLEOPTERA : CARABIDAE)

By Everard B. Britton, M.Sc., F.R.E.S.

(*Department of Entomology, British Museum (Natural History)*.)

The greater part of the material on which this paper is based was collected by Mr. H. C. Dollman in N.W. Rhodesia (1914–16).

The African species of *Callistomimus* have been listed by Alluaud (*Livre du Centenaire, Soc. ent. Fr.*, : 273). It is pointed out by this author that the individual species of the genus appear to be very restricted in their distribution. This is borne out by the fact that the Dollman collection included twelve species, of which eleven are undescribed.

There seems little doubt that future collecting, in particular in west Africa, will bring to light many new forms.

The types of all the species described here are in the British Museum.

Callistomimus tumidipes sp. n., fig. 1.

Length : 5·2 mm.

Colour : head dark metallic green; clypeus, labrum, mandibles and palpi testaceous; antennae black with the 1st and 2nd joints brown; pronotum reddish-yellow with two variable dark metallic green spots on the disc; elytra dark greenish-black with a sharply defined white spot on intervals 6, 7, and 8, about ¾ of the length of the elytra from the base; the 3rd interval yellow from the base almost as far as the apex; basal half of the 5th interval yellow; a yellow spot on the 5th interval close to the large white spot, and an ill-defined yellowish spot at the apex on intervals 2 and 3; basal halves of intervals 7 and 8 yellow, and connected with the yellow part of the 5th by a spot on the 6th; margin yellow from the base to the white spot; epipleurae yellow. Ventral surface : head and prothorax testaceous; remainder of the thorax and abdomen black. Legs pale yellow with the apices of the femora darker; terminal joints of the hind tarsi brown. *Head :* slightly convex with closely-set, sharply-defined shallow punctures. *Prothorax :* length 0·94 mm., width 1·3 mm. Slightly convex, punctured like the head; posterior angles acute, sharp, reflexed and directed slightly backwards; median line only slightly impressed; basal foveae well marked. *Elytra :* ♂ length 3·0 mm., width 1·9 mm.; ♀ length 2·8 mm., width 1·9 mm. Tapering more in ♂ than ♀. Striae well marked, unpunctured; intervals convex. *Legs :* hind tibiae swollen distally in both sexes, as are the terminal joints of the hind tarsi. These characters do not occur in any other known species.

Locality. N.W. Rhodesia : Mwengwa (27° 40′ E., 13° S.), Lukanga Swamp (*H. C. Dollman*). 1 ♂, 3 ♀♀.

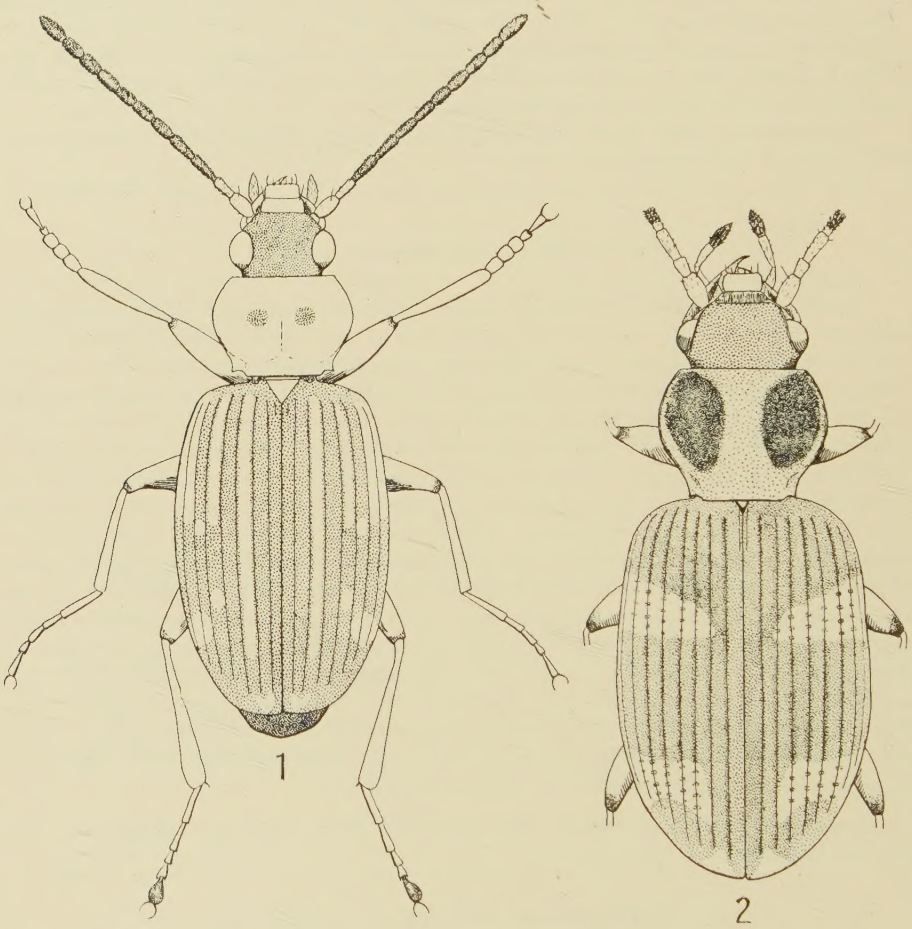
Callistomimus dollmani sp. n., fig. 2.

Length : 5·6 mm.

Colour : head metallic purple above; mandibles and clypeus piceous; labrum testaceous; palpi pale yellow with the terminal joints darker; antennae black, with the first three joints and part of the 4th pale brown; pronotum yellowish-red or red, with a dark blue patch on each side; scutellum red; elytra dull black with an anterior and a posterior pale yellow band on each side, and pale yellow triangular apical spots on intervals 1, 2 and 3, extending upwards on the 2nd intervals; epipleurae pale yellow; legs pale yellow, brown

at the apices of the femora and tibiae; terminal joints of the tarsi brown. Ventral surface: black with the mesepisterna and epimera brown. *Head:* covered with sharply defined deep circular punctures; no pubescence. Eyes smaller and less prominent than in most species of the genus. *Prothorax:* length 1·1 mm., width 1·6 mm.; very convex and heavily punctured. Posterior angles sharp and rectangular; ventral surface roughly punctured and sparsely pubescent. *Elytra:* length 3·4 mm., width 2·4 mm. Intervals moderately convex, aciculate, with a short yellow pubescence like the prothorax; striae well marked, faintly punctured; abdominal sterna coarsely punctured and sparsely pubescent.

Localities. N.W. Rhodesia: Kashitu (type ♀), Lukanga Swamp (*H. C. Dollman*). Congo–Zambesi watershed (type ♂), (*H. S. Evans*). 1 ♂, 4 ♀♀.



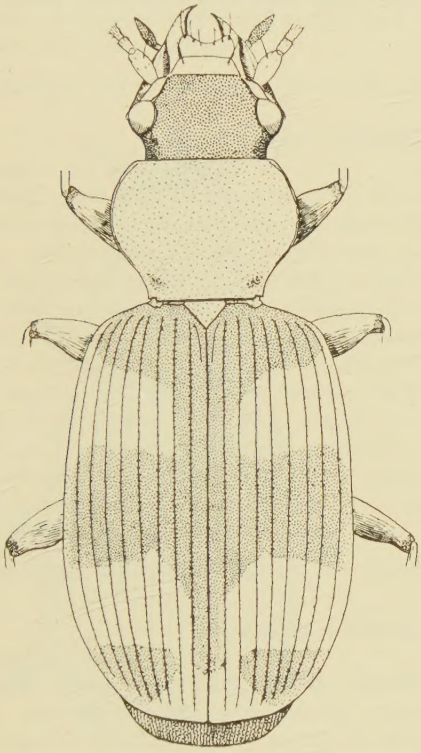
Callistomimus latefasciatus sp. n., fig. 3.

Length: 6·65 mm.

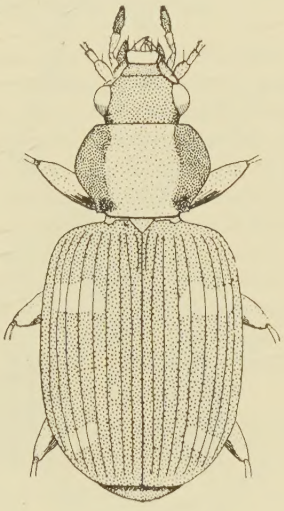
Colour: head metallic greenish-blue above; clypeus, labrum and mandibles testaceous; palpi pale yellow with the terminal joints brown; antennae black with the first three joints and part of the fourth testaceous; prothorax and scutellum reddish-yellow, with short

yellow pubescence; elytra dull black with two pairs of pale yellow marginal bands and a pale yellow apical sutural spot; the anterior band extends from the 2nd stria to the margin. The posterior band extends from the 1st stria to the margin and is connected on the 2nd and 3rd intervals with the apical spot. Both bands and apical spot are very large (fig. 3). Extreme margin and epipleurae pale yellow. The elytra have a short yellow pubescence. Dorsal surface of the abdomen black. Legs pale yellow with the apices of the femora, tibiae and tarsi brown. Ventral surface testaceous with a black stripe down the middle; abdomen darker brown. *Head :* rather flat, evenly punctured above, briefly pubescent. *Prothorax :* length 1·3 mm., width 1·65 mm.; narrower at the base than apex; convexity moderate, not nearly as great as in *C. dollmani*; hind angles sharp and rectangular. *Elytra :* length 3·85 mm., width 2·6 mm.; striae well defined and punctured; intervals aciculate, briefly pubescent and almost flat.

Locality. N.W. Rhodesia : Namaula (*H. C. Dollman*). 1 ♀.



3



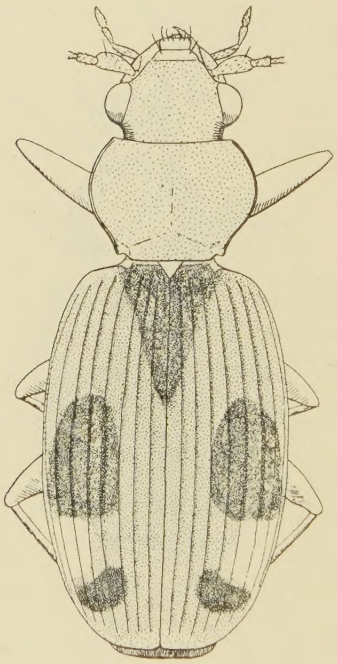
4

Callistomimus bicolor sp. n., fig. 4.

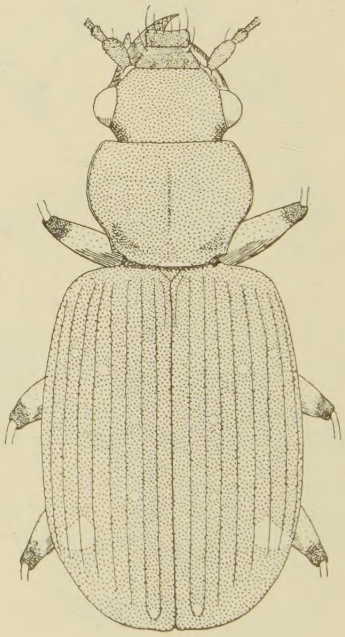
Length : 4·6 mm.

Colour : head dark metallic blue above; clypeus dark brown; mandibles dark brown, paler towards the tips; labrum pale yellow; palpi pale yellow, terminal joints infuscate; antennae black with the first three joints brown; prothorax with median third bright reddish-yellow; broad metallic blue borders occupying the remaining one-third of the width of the prothorax on each side; scutellum reddish-yellow; elytra black with a faint metallic blue or violet iridescence; a transverse pale yellow band about one-quarter of the length of

the elytra from the base, extending from the 3rd to the 8th stria. A similar posterior band, one-quarter from the apex of the elytra, extends from the 4th to the 8th stria. A small yellow spot slightly postmedian on interval 3. Epipleurae yellowish-brown. Legs: femora brown, tibiae and tarsi pale yellow; coxae black anteriorly. Ventral surface: head shining black except mentum and submentum which are brown with black in the middle; prosternum and ventral part of the pro-episternum black; marginal part of the latter reddish; meso- and metasterna black; inner parts of the mesepisterna also black; metepisterna and all abdominal sterna reddish-yellow, except for a small black patch on the 2nd abdominal sternum between the hind coxae. *Head:* uniformly punctured above; with short yellow pubescence. *Prothorax:* length 0·9 mm., width 1·3 mm.; convex and heavily punctured; a short yellow pubescence; posterior angles slightly acute, sharp and directed slightly backwards; scutellum punctured like the pronotum; prosternum and pro-episternum with large, widely spaced punctures; meso- and metepisterna also punctured; abdominal sterna sparsely pubescent. *Elytra:* length 2·7 mm., width 1·8 mm.; depressed; striae well marked. Intervals almost flat, aciculate and with a short yellow pubescence.



5



6

Locality. N.W. Rhodesia: Kashitu, N. of Broken Hill (*H. C. Dollman*). 6 ♂♂, 6 ♀♀. Taken on "ant-hills."

C. bicolor bears a close resemblance to *C. gratus* Pér. in colour and pattern. *C. gratus* Pér., however, is larger (length 5·8 mm.) and lacks the broad blue borders of the prothorax. Further, the base of the prothorax is considerably narrower than the apex, while in *C. bicolor* base and apex are of equal width.

Callistomimus azarensis sp. n., fig. 5.

Length : 5·6 mm.

Colour : head and prothorax bright orange-yellow, including mandibles, clypeus, labrum, palpi and the first three joints of the antennae; remainder of the antennae black; ground-colour of the elytra metallic greenish-black, but largely obscured by the pattern. A yellow-brown band starts at each shoulder, runs backwards and inwards until the two meet at the suture half-way down the elytra and pass together to the apex. A post-median white spot on the 6th, 7th and 8th intervals is connected with the sutural band and with a marginal yellowish-brown band. Legs wholly yellow. Ventral surface : head and prothorax testaceous; mesosternum and mesepisternum testaceous; remainder of the thorax black; abdominal sterna dark brown, paler in the middle. *Head :* closely but not deeply punctured; pubescent. *Prothorax :* length 1·1 mm., width 1·5 mm. Puncturation like that of the head, so that head and prothorax appear smooth in comparison with most species of the genus; moderately convex; median line impressed. Hind angles sharp and rectangular; basal foveae rather deep; pubescent. *Elytra :* length 3·6 mm., width 2·2 mm.; depressed; striae well marked and vaguely punctured; intervals almost flat, aciculate and briefly pubescent.

Locality. N. Nigeria : Azare (*Ll. Lloyd*). 3 ♂♂, 3 ♀♀.

Callistomimus bimaculatus sp. n., fig. 6.

Length : 5·6 mm.

Colour : head very dark metallic green, almost black; clypeus and labrum dark brown; mandibles black; antennae brownish-black with the first two joints paler; palpi dark brown; prothorax dark brown, paler at base and apex; elytra dull black with a white spot extending from the 5th to the 8th stria on each side, about three-quarters length from the base; five very small and obscure pale spots on each side; one at the apex of the 2nd interval, one just antemedian and one postmedian on interval 3; one on each of intervals 5 and 6, about one-quarter length from the base. Legs yellow with apices of femora and tibiae black; coxae black; tarsi brown. Ventral surface entirely black. *Head :* closely punctured, pubescent. *Prothorax :* length 1·1 mm., width 1·5 mm.; densely and roughly punctured; pubescent; convexity moderate, lateral margins narrowly reflexed; hind angles obtuse. *Elytra :* length 3·2 mm., width 2·3 mm.; depressed; striae well defined, faintly punctured; intervals moderately convex, aciculate, pubescent. Isodiametric microsculpture very pronounced.

Locality. Belgian Congo : 18 miles S. of Elizabethville (*H. S. Evans*). 1 ♀.

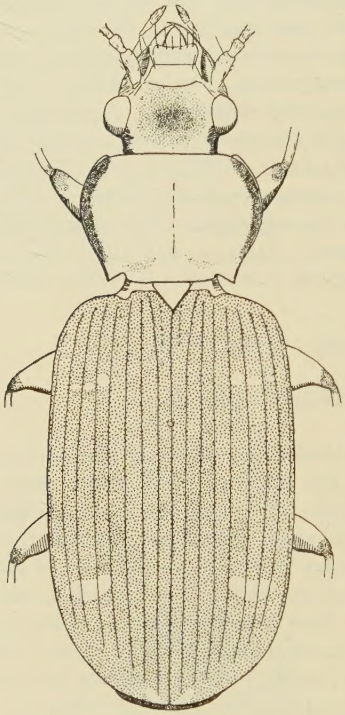
Callistomimus depressus sp. n., fig. 7.

Length : 6·3 mm.

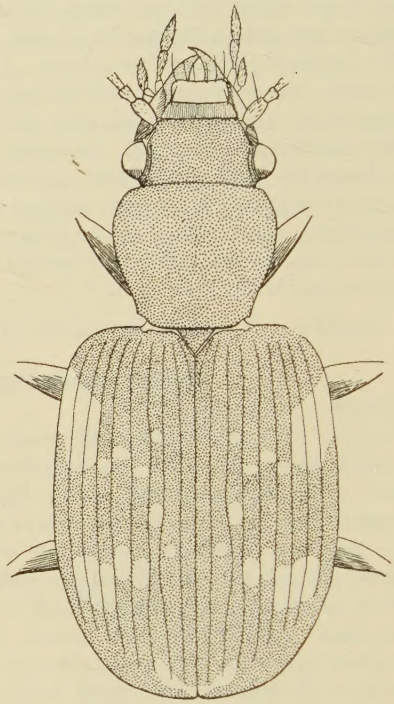
Colour : head brown, frons darker; clypeus, labrum and mandibles testaceous; palpi yellow, terminal segments dark brown; antennae black with the first three segments testaceous and the 4th brown; pronotum and scutellum brown; lateral margins of the pronotum dark brown; elytra metallic greenish-black with reddish tints; a small yellow spot about one-fifth of the length of the elytra from the base on the 5th interval, and two obscure spots adjoining it on the 5th and 6th intervals. The three spots evidently represent the usual anterior fascia. A large yellow spot about one-quarter length of the elytra from the apex, extending from the 4th to the 8th stria; an obscure pale spot at the apex of the 1st and 2nd intervals; epipleurae pale yellow. Legs pale yellow, dark brown at the apices of femora and tibiae. Dorsal surface of the abdomen piceous; ventral surface entirely testaceous. *Head :* flat; very coarsely and deeply punctured. *Prothorax :* length 1·2 mm., width 1·6 mm.; moderately convex; a trace of a median impression present; hind angles sharp and acute; scutellum punctured like the thorax. *Elytra :* length 1·2 mm.–

3·8 mm., width 2·5 mm.; depressed; striae well marked, faintly punctured; intervals moderately convex, aciculate, pubescent. Isodiametric microsculpture very pronounced.

Locality. N.W. Rhodesia: Solwezi district (26° 20′ E., 12° 10′ S.), Lusemska (*H. C. Dollman*). 1 ♂, 1 ♀.



7



8

Callistomimus rugosus sp. n., fig. 8.

Length: 6·4 mm.

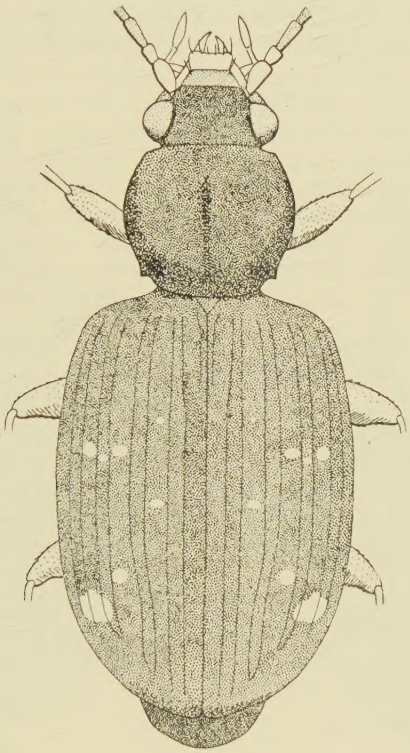
Colour: head and pronotum dark metallic greenish-black; clypeus dark metallic green; labrum and mandibles testaceous; antennae black with the first three joints testaceous; palpi yellow; scutellum black; elytra shining black with two transverse rows of yellow spots on each side, evidently representing the usual transverse fasciae. There is also the usual median spot on the 3rd interval, and a spot at the apex on intervals 1, 2 and 3. The anterior row comprises a large spot extending from stria 6 to the margin, and four small spots on intervals 3, 4, 5 and 6. The posterior row consists of a large spot extending from the 5th to the 8th stria and three small spots on intervals 2, 4 and 5. The spots of each row show a tendency to fusion in some specimens. *Head:* rough; covered with large close punctures. Slightly pubescent; eyes small. *Prothorax:* length 1·25 mm., width 1·6 mm.; very convex, punctured like the head; lateral margins not prominent as in most species. Hind angles sharp, but very obtuse; ventral surface thickly punctured. *Elytra:* length 3·8 mm., width 2·5 mm.; convex; shoulders prominent; striae impressed and punctured. Striae 2, 3 and 4 are sinuate. Intervals convex and roughly punctured. Ventral surface: mesepisterna punctured; remainder of the thorax and abdomen smooth; abdominal sterna pubescent.

Locality. N.W. Rhodesia : Kashitu, N. of Broken Hill (*H. C. Dollman*). 3 ♀♀.

Callistomimus convexicollis sp. n., fig. 9.

Length : 6·65 mm.

Colour : head, thorax and elytra black; clypeus brown; labrum, mandibles, palpi and the first three joints of the antennae testaceous; remainder of the antennae black; elytra with some indistinct yellow spots, two on the 3rd interval, two on the 5th, one each on the 6th and 7th intervals and a larger spot extending between striae 5 and 8; ventral surface entirely black. Legs : tibiae pale yellow; femora and tarsi slightly darker. *Head :* flat; frons covered with large deep punctures except for a smooth patch in the middle; punctures not as close as in *C. rugosus*; mandibles relatively straight. *Prothorax :*



9

length 1·4 mm., width 1·7 mm.; base and apex equal in width (1·3 mm.); extremely convex; lateral margins very reduced; hind angles small but obtuse and sharp; median line impressed; coarsely punctured like the head; ventral surface punctured. The degree of puncturation of both head and prothorax is variable. *Elytra :* length 3·6 mm., width 2·7 mm.; striae punctured; striae 3 and 4 are sinuate posteriorly; intervals convex, thickly punctured; intervals 2, 4 and 6 are narrower than 1, 3 and 5. Ventral surface : meso- and metathorax punctured; abdominal sterna smooth.

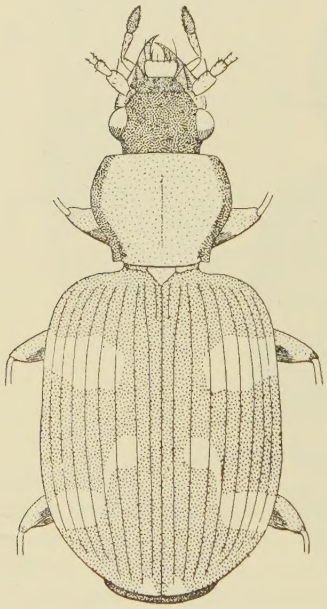
Locality. N.W. Rhodesia : Kashitu (*H. C. Dollman*). 1 ♂. Belgian Congo : Lulua, Kapanga (*G. F. Overlaet*). 1 ♂ (paratype in the Congo Museum).

C. convexicollis and *C. rugosus* are evidently closer to each other than to other species of the genus. They both have an extremely convex, coarsely punctured prothorax, thickly punctured elytra and sinuate striae.

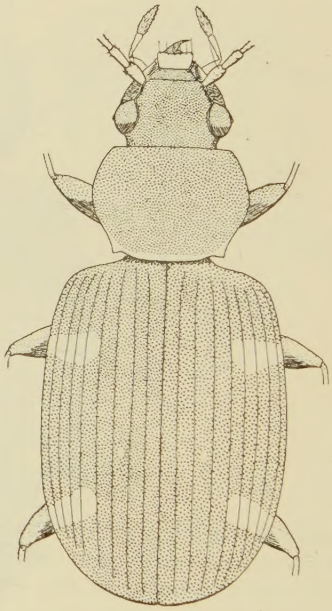
Callistomimus gratus Pér. **marginatus** var. n., fig. 10.

Length : 5·3 mm.

Colour : head dark metallic greenish-blue; clypeus and mandibles dark brown; labrum pale brown; palpi yellow with the terminal joints dark brown; antennae black with the first three segments testaceous; prothorax orange-red with the lateral borders blue-black to a depth of 0·18 mm. (one-seventh of the greatest width of the prothorax); elytra black with the 9th interval brownish and the epipleurae yellow; a pale yellow anterior marginal band on each side, extending from the 3rd to the 8th stria, and a posterior band extending from the 4th to the 8th stria; a yellow postmedian spot on the 3rd interval, extending on to the 2nd and 4th intervals. In some examples this spot is connected with



10



11

the anterior inner corner of the posterior band. The elytra behind the posterior band are brownish like the 9th intervals. Scutellum reddish; legs pale yellow with the apices of all joints dark brown. In some examples the legs are almost entirely brown. Dorsal surface of the abdomen black; ventral surface yellowish-brown with the median part of the head, pro-, meso-, and metasterna black. *Head :* slightly convex, heavily punctured and slightly pubescent. *Prothorax :* length 1·0 mm., width 1·3 mm.; convex, punctured and pubescent like the head; posterior angles varying in sharpness. *Elytra :* length 3·0 mm., width 2·15 mm.; striae well defined, unpunctured; intervals slightly convex, aciculate and with a sparse yellow pubescence.

Localities. N.W. Rhodesia : Lukanga, Kashitu (*H. C. Dollman*). 16 ♂♂, 23 ♀♀.

This form differs from the typical *C. gratus* Pér. in having the lateral borders of the prothorax blue in colour, the larger and more distinct elytral markings, the more convex intervals between striae, and the abdominal sterna entirely yellowish-brown.

Callistomimus rufiventris sp. n., fig. 11.

Length : 5·1 mm.

Colour : head, thorax and elytra dull black with short yellow pubescence; clypeus and mandibles dark brown; labrum light brown; palpi yellow with terminal segments dark brown; antennae black with the first three joints and the base of the fourth brown; base and extreme lateral margins of the pronotum reddish; scutellum black; elytra with three pale yellow spots on each side. The anterior spot, about one-quarter of the length of the elytra from the base, extends from the 4th to the 8th stria. The posterior spot is narrower, but also extends from the 4th to the 8th stria. The third spot is small, slightly postmedian on the 3rd interval. Lateral margins of the elytra reddish; epipleurae yellow; tibiae and tarsi pale yellow with the terminal joints of the latter dark brown; femora brown; coxae piceous. Ventral surface : mentum brown; head, pro-, meso-, and metathorax black; abdominal sterna reddish-brown. *Head :* almost flat, coarsely and evenly punctured. *Prothorax :* length 1·0 mm., width 1·4 mm.; pronotum punctured like the head; hind angles sharp, rectangular, and reflexed; disc moderately convex. *Elytra :* ♂ length 2·9 mm., width 1·8–2·0 mm.; ♀ length 3·17 mm., width 2·16 mm.; striae well marked, unpunctured; intervals convex and aciculate.

Localities. N.W. Rhodesia : Kashitu, Lukanga (*H. C. Dollman*). 14 ♂♂, 9 ♀♀. Mashonaland : Salisbury (*G. A. K. Marshall*). 1 ♂, 1 ♀.

This species appears to be closely related to *C. quinquemaculatus* Laferté. By the courtesy of M. René Oberthür I have been able to examine the type of *C. quinquemaculatus* Laf. It can be distinguished from the species here described by its smaller size (length 4·8 mm., elytra 2·7 mm.), by the slightly antemedian position of the spot on the 3rd interval, by the presence of an apical sutural spot, and its totally black abdominal sterna. *C. quinquemaculatus* Laf. is recorded from Portuguese Guinea.

I am indebted to Mr. G. E. Bryant for permission to describe material in the collections of the Imperial Institute of Entomology, and to M. Burgeon, who kindly sent material for study.

NEUE HISPINEN AUS DER SÜDSEE (COLEOPTERA)

Von Dr. F. Spaeth.

Communicated by A. W. McKenny-Hughes, D.I.C.

Bronthispa mariana sp. n.

Oben und unten glänzend, oben dunkel pechbraun, mit ein wenig helleren Flügeldecken, unten gelbbraun; wie alle *Bronthispa* lang und schmal, platt gedrückt. *Fühler* etwas länger als Kopf und Halsschild zusammen, walzenförmig, glänzend, mit sehr zerstreuten feinen Punkten, vom 7. Glied an auf der Unterseite matt und etwas rauh und platt gedrückt, ein wenig dicker; das 1. Glied dick, walzenförmig, doppelt so lang als dick, das 2. kurz, kaum länger als dick, das 3. bis 6. um die Hälfte länger, unter sich wenig verschieden, das 7. das längste, mehr als doppelt so lang als dick, die letzten vier wieder kürzer. Kopf kurz, mit stark vorgequollenen Augen, eingeschnürtem Hals und fast quadratischer Stirnplatte, die durch eine tiefe Mittelrinne in zwei gewölbte, schwach glänzende und zerstreut punktierte Hälften zerfällt; ihre Seiten sind parallel, ihr Vorderrand quer abgeschnitten und in der Mitte in einen oben tief ausgehöhlten Fortsatz ausgezogen, der beim ♂ so lang als das 1. Fühlerglied, beim ♀ kaum halb so lang als dieses ist; unten ist er eben, vorn stark glänzend, neben der Fühlerbasis lanzettförmig erweitert und von da an matt, verloschen punktiert, mit geglätteter Mittellinie und abstehender Behaarung; Oberlippe mit einem feinen Längskiel. Vorderschenkel ohne Zahn. *Halsschild* fast doppelt so breit als der Kopf, nur wenig länger als breit, am Vorderrande schwach im Bogen vorgezogen und daneben jederseits mit einem Zähnchen; aussen von diesem schwach lappenförmig erweitert, wobei an dieser Stelle die Oberfläche in der gleichen Ebene bis an den Rand reicht, während sie vorher und nachher zu ihm herabgebogen ist; die Seiten sind vorn seicht ausgerandet, in der rückwärtigen Hälfte parallel; die Basis hat ein quer vorspringendes Eckzähnchen und verdickten Rand; die Scheibe hat in der vorderen Hälfte, sowie an der Seite auch weiter rückwärts sehr zerstreute grobe Nabelpunkte, dazwischen eine ebenfalls sehr sparsame mikroskopische Punktulierung. *Schildchen* glatt, glänzend, ein längliches Dreieck bildend. Flügeldecken gut viermal so lang als breit, flach, vor der Mitte sehr schwach ausgerandet, je mit einem aus 5–6 Punkten bestehenden Skutellarstreif und bis zur Mitte 8, von da an 10 feinen Punktstreifen, mit vielmals breiteren stellenweise fein punktulierten Zwischenräumen; von diesen sind die alternierenden an der Spitze oft nur sehr undeutlich herausgehoben, der vorletzte in der rückwärtigen Hälfte etwas höher; die Spitze der Flügeldecken ist beim ♂ verrundet, beim ♀ schwach abgestutzt; das letzte Sternit ist beim ♂ weit ausgerandet, beim ♀ abgestutzt.

Grösse: 8 × 2 mm.

Das Imperial Institute of Entomology hat mir 3 ♂♂ und 2 ♀♀ übermittelt, die von *F. X. Williams* auf den Marianen in Saipan im Juli 1936 von Kokospalmen gesammelt wurden.

In Färbung und Grösse erinnert *B. mariana* an die in Mauritius und Rodriguez gefundene *B. limbata* Waterh. (= *gleadowi* Weise), mit welcher sie auch die kurze, glänzende und zerstreut punktierte Stirnplatte gemeinsam hat; doch ist diese bei der letzteren Art eben und vorn zum Fortsatz abgeschrägt; von den anderen bisher beschriebenen Arten ist *B. mariana* durch die kürzere, stark gewölbte, glänzende und weniger dicht punktierte Stirnplatte, den viel längeren Fortsatz des ♂, glänzende Oberseite der Endglieder der Fühler und das im Verhältnis zum 2. längere 3. Fühlerglied verschieden.

Die Holotypen beider Geschlechter sind im British Museum, Paratypus in meiner Sammlung.

Promecotheca.

Zwei *Promecotheca*-Arten wurden von Mr. R. A. W. Lever auf den Solomons-Inseln gesammelt und zeigen nahe Verwandtschaft unter einander und mit der von demselben Herrn gesammelten *P. ptychospermae* Maul. (1935, *Ann. Mag. nat. Hist.* (10) **15** : 653); bei allen drei Arten ist die Fühlerspitze gelb, eine in der Gattung sonst noch nicht beobachtete Eigenheit.

Ueber meine Bitte hatte Sir Guy A. K. Marshall, der mir die beiden neuen (*P. leveri* und *P. salomonina*) zur Beschreibung freundlichst übersendete, die besondere Güte, den Typus von *P. leveri* mit jenem von *ptychospermae* zu vergleichen und mir das Ergebnis seiner Untersuchung zur Verfügung zu stellen, wofür ich mir erlaube, hier nochmals meinen ergebenen Dank auszusprechen. Die Artverschiedenheit der beiden neuen Arten von *ptychospermae* Maul. steht hiedurch ausser Zweifel; im Zusammenhalte mit Maulik's Beschreibung ergeben sich folgende Unterschiede der drei Arten :—

1(2). Fühler an der Basis weiter getrennt, die Entfernung ihrer Insertionsstellen ist grösser als die Länge des 2. Fühlergliedes; nur das letzte Fühlerglied ist gelb, die übrigen vom 2. angefangen schwarz; Flügeldecken in der ganzen Länge mit 8 Punktstreifen; die primären Zwischenräume sind auf den schwarzen Stellen der rückwärtigen Hälfte nicht gekielt; die Punktierung ist breiter und weniger dicht; in der schwarzen Zeichnung ist kein heller Innenfleck, nur der Rand von der Basis bis zur Spitze und die Naht an der Spitze sind gelb; Hinterschenkel gezähnt . . . . . *ptychospermae* Maul.

2(1). Fühler an der Basis genähert, die Entfernung ihrer Insertionsstellen ist kleiner als die Länge des 2. Fühlergliedes; die zwei letzten Fühlerglieder sind weissgelb; Flügeldecken von der Basis bis vor die Mitte mit 10, von da an mit 8 Streifen, da sich nach dem 5. zwei Zusatzstreifen an der Basis einschieben; die schwarze Zeichnung der Flügeldecken hat innen einen gelben Fleck.

3(4). Hinterschenkel an der Unterseite mit einem Zahn; Kopf infolge der vorgequollenen Augen breiter als der Halsschild; die gelbe Innenmakel liegt vorn im schwarzen Feld und ist nach vorn offen; das 2; Fühlerglied ist gelbbraun, das 3. und 9. sind pechschwarz; der 1. primäre Zwischenraum ist an der Basis verbreitert und abgeflacht *leveri* sp. n.

4(3). Hinterschenkel ohne Zahn; Kopf schmäler als der Halsschild; die gelbe Innenmakel liegt hinten im schwarzen Feld und ist nach hinten offen; ausser den zwei letzten ist nur das 1. Fühlerglied hell, der 1. primäre Zwischenraum ist an der Basis nur wenig verbreitert und nicht abgeflaht . . . . . *salomonina* sp. n.

Promecotheca leveri sp. n.

Ober- und Unterseite lebhaft gelb, auf den Flügeldecken die letzten zwei Drittel schwarz, innen mit einer gemeinsamen, lang-elliptischen gelben Makel, die durch die gleichfarbige Nahtkante mit der Zeichnung des vorderen Drittels zusammenhängt, hinten nur bis vor den Abfall, an der Seite bis auf den 2. primären Zwischenraum reicht. An den Fühlern sind die Glieder 4 bis 8 schwarz, 3 und 9 pechschwarz, 1 gelb, 2 gelbbraun, 10 und 11 hellgelb. *Fühler* lang und dünn, von mehr als halber Körperlänge, das 1. Glied um die Hälfte länger als das zweite, beide glatt, glänzend, die folgenden lang behaart, matt, rauh, das 3. das längste, dreimal so lang als das zweite, das 4. bis 7. sind um die Hälfte kürzer, noch mehr als doppelt so lang als dick, das 8. um die Hälfte kürzer, das 9. und 10. noch etwas kürzer, das

letzte wieder länger, zugespitzt. Augen vorgequollen, der Kopf hiedurch breiter als der Halsschild, hinten eingeschnürt, zwischen den Augen ohne Eindruck; Halsschild stark lackartig glänzend, glatt, vorn schwächer, vor der Basis tief eingeschnürt, in jeder Ecke mit einer Tastpore und Borste. Flügeldecken mit 8 Punktstreifen, die sich im ersten Drittel auf 10 vermehren; hiedurch unterscheidet sie sich von der sonst ähnlichen Gruppe der *cumingi* und *apicalis*, in der den 8 Streifen an jener Stelle nur eine zuwächst; die Streifen sind sehr dicht und regelmässig, grob punktiert, ihre Zwischenräume schmal, die drei primären als in der ganzen Länge gleiche, niedrige Kiele ausgebildet, der 1. vorn breiter und abgeflacht. Alle Schenkel unten mit lang abstehender, die Schienen mit kürzerer, dichterer Behaarung; die Hinterschenkel mit einem nach hinten gerichteten, spitzigen Zahn; Sternite lang behaart, ebenso die Spitze der Flügeldecken.

Länge: 6 mm.

British Solomons Inseln, *R. A. W. Lever*, 7.vii.1935; Holotypus im British Museum.

Promecotheca salomonina sp. n.

Ober- und Unterseite lebhaft und ziemlich gesättigt gelb, die Fühler mit Ausnahme des 1. und der zwei letzten Glieder schwarz, die Flügeldecken mit schwarzer Zeichnung; diese beginnt an der Naht im ersten Viertel, ist zu den Seiten nach hinten abgeschrägt und nimmt mehr als die rückwärtige Hälfte mit Ausnahme eines ganz schmalen, gelben Randsaumes ein; an der Spitze wird sie von einer gelben Makel ausgerandet, die nach vorne etwa bis zur Querlinie der Spitze der Hinterschenkel, nach aussen bis auf den 5. Punktstreif reicht; die schwarze Zeichnung wird hiedurch aussen jederseits zangenförmig nach hinten verängert. Fühler wie bei der vorigen aber das 6. und 7. Glied etwas kürzer als das 4. und 5., und das 8. bis 10. sind fast gleich lang. Augen weniger vorgequollen, Kopf daher nicht breiter als der Halsschild; letzterer wie bei der früheren; Flügeldecken mit noch gröberen und tieferen Punktstreifen als die frühere; die primären Zwischenräume sind höher als die anderen, schwach kielig herausgehoben, der dritte aber im ersten Drittel nicht, der erste auf der gelben Fläche weder breiter, noch flach gedrückt. Behaarung der Schenkel, Schienen und Unterseite wie bei der früheren, die Hinterschenkel aber ohne Zahn.

Länge: 6 mm.

British Solomons Inseln: Guadalcanal, Kovakombi, 1.v.1936, Holo- und ein Paratypus von *R. A. W. Lever* gesammelt; Typi wie früher; beide Arten wurden vom Imperial Institute of Entomology zur Beschreibung übersendet.

Ausser den oben angeführten drei Arten wurden von den Solomons Inseln noch folgende *Promecotheca* beschrieben: *alpiniae* und *guadala* Maul. und *violacea* Uhm.; alle drei aus der Gruppe der *papuana* Csiki (= *antiqua* Weise), mit 10 vollständigen, aber in der Mitte durch Querrunzeln undeutlichen Punktstreifen; *guadala* Maul. und *violacea* Uhm. sind übrigens zweifellos die gleiche Art; der geringe Unterschied in der dunkleren Färbung der Unterseite von *violacea* dürfte auf Tropenfäule zurückzuführen sein; beide Beschreibungen wurden im September 1932 veröffentlicht, so dass sich schwer feststellen lassen dürfte, welcher Name Priorität hat.

Editor's Note.

It is possible to determine beyond doubt the relative dates of publication of the names in question since *violacea* Uhm. was first published in *Fol. Zool. Hydrobid.* **4**: 13–15 and this was received at this address on 15.ix.1932 (published at Riga "3.ix.1932") and *guadala* Maul. was first published in *Stylops*, **1**: 204 published at London on 15.ix.1932.

RESULTS OF THE OXFORD UNIVERSITY EXPEDITION TO BORNEO, 1932. DESCRIPTION DE *NICOTIKIS HOBBYI* SP. N. (COL. HISTERIDAE) *

Par A. de Cooman.

Communicated by Dr. B. M. Hobby, F.R.E.S.

Nicotikis hobbyi sp. n.

Ovalis, parum convexus, niger, nitidus. Caput sublaeve, stria integra lateribus haud angulata, fronte transversim juxta striam impressa. Pronotum laeve, arcuatim emarginatum, puncto postoculari conspicuo, stria integra antice proxima, in angulis anticis rotundata, lateribus introarcuata, intervallo in medio latiori. Elytra, excepto extremo apice punctato et dense reticulato, laevia; striis subhumeralibus nullis, dorsalibus tribus

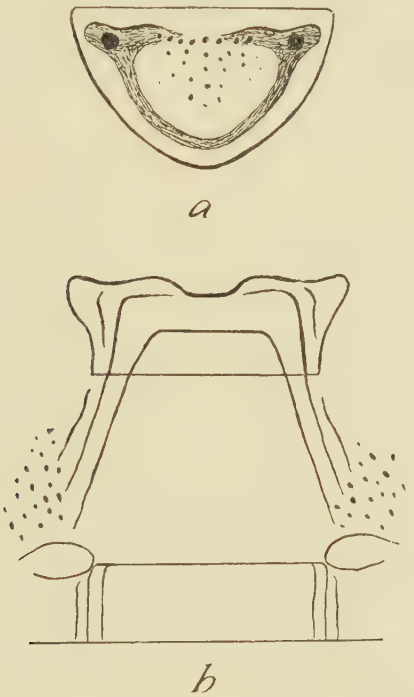


Fig. 1.—*Nicotikis hobbyi* sp. n., *a*, sculpture pygidiale, *b*, face ventrale.

primis integris, quarta et quinta apicalibus brevibus, suturali utrinque parum abbreviata; epipleura tristriata, striis valde sinuatis parallelis. Propygidium ocellato-punctatum, punctis apice minoribus; pygidium subtiliter reticulatum, in angulis anticis foveolatum,

* For a general account of this expedition see T. H. Harrisson, 1935, *Geogr. J.*, **82** : 385–410.

foveolis basi linea punctorum et postice sulco submarginali integro conjunctis, disco sparse et irregulariter punctato, punctis postice sensim deficientibus. Sterna laevia; prosternum breve angustum haud striatum, lobo antico marginato sparse, lateribus fortius, punctato. Mesosternum breviter emarginatum, tristriatum : striola externa laterali bisinuata, stria marginali antice breviter interrupta, stria discali subarcuata integra; metasternum sine stria longitudinali mediana et primum segmentum abdominis laeve lateribus tristriata. Tibiae I et II quinque-dentatae, tibiae III tridentatae. Long. (cap. et pyg. excl.) 3·3, larg. 2·1 mm.

Habitat. Bornéo : Sarawak, foot of Mt. Dulit at junction of rivers Tinjar and Lejok, in reed bed (*B. M. Hobby*, 9.viii.1932).

Type unique in coll. British Museum.

Par l'un ou l'autre des trois caractères suivants : carène prosternale sans stries, base du mésosternum échancrée, striation élytrale, *N. hobbyi* se distingue aisément de la plupart des espèces du genre; par ces mêmes caractères il se rapproche de *ovulum* Schmidt, *pagana* Lewis, *sauteri* Bickhardt et *larnaudiei* Desbordes. Sans compter les autres différences, il se distingue de ces quatre dernières espèces par la striation triple du premier segment abdominal, du métasternum et du mésosternum.

La ponctuation discale du pygidium doit être très variable comme on le constate chez *N. beatula* Lewis.

SIX NEW NEOTROPICAL MELOLONTHIDS (COLEOPTERA; SCARABAEIDAE)

By Lawrence W. Saylor.

(*University of California.*)

Communicated by G. J. Arrow, F.R.E.S.

Among some material lent for study by the British Museum, through the kindness of Mr. G. J. Arrow, I found the new species described herein; all types, as indicated, are in the Museum collection.

I have, for some years, been engaged in a revisional study of the genera *Lachnosterna* (*Phyllophaga*), *Phytalus* and *Listrochelus*, from Neotropical regions only. The more material that can be examined the more complete will the revision be, and I earnestly solicit for study specimens from museums or individuals or for exchange.

Lachnosterna plairi sp. n.

Elongate-ovate, slightly wider behind, rufocastaneous, shining. Head with clypeus and front with long erect hair, very coarsely rugosely sculptured, the former faintly tumid at centre of base, apex narrowly angularly emarginate, angles very broadly rounded; the 10-segmented antennae rufotestaceous, club slightly shorter than funicle. Thorax nude except for the long dense cilia on all the margins, roundly dilated at sides, margin not crenate, front angles obtusely angulate, hind angles obtusely rounded but subprominent; disc moderately irregularly coarsely punctured, the punctures separated by one to three times their diameters and sparser at sides. Elytra nude, rugosely punctured. Pygidium polished, convex but flattened at middle, finely moderately sparsely punctured, with short suberect inconspicuous hairs. Abdomen slightly convex, very densely punctured, fifth segment slightly declivious towards apex in apical $\frac{3}{4}$, with a dense granular area at middle, with a few short hairs; sixth segment as long as fifth, broadly shallowly subfoveate, the bottom of the concavity flattened and moderately densely punctured, with long cilia and rounded carina at apex, the latter interrupted at middle of apex. Hind spurs free, one $\frac{3}{4}$ length of the other. Claws with a sharp submedian tooth, basal dilatation obtuse and but little evident. Length 15·5 mm. Width 8 mm.

The unique *type* male, from Mexico, was taken by *Truqui* and is in the British Museum. This species resembles *angulicollis* most closely, but the antennal club is much shorter (more as in the variety), the male genitalia although related are different, the pygidium is pilose and the thorax is not crenate. It is also near *foveicollis*, but the fifth abdominal segment is punctured, and the colour is not nigro-piceous. Named after my good friend, Mr. Ted Plair.

Lachnosterna (Phytalus) calderasa sp. n.

Oblong-ovate, much wider behind, rufocastaneous, shining, entirely hairy above. Head with clypeus very short, sparsely punctured, with long erect hair, apex truncate, angles very broadly rounded; front coarsely rugosely punctured, with very long fine erect hair. Thorax broadly rounded at sides, margin ciliate, slightly crenate behind, front angles obtuse, hind angles rectangular; disc coarsely closely umbilicately punctured, with very dense long silky erect hair. Elytra coarsely sparsely punctured, with long and shorter hairs intermixed. Pygidium very convex, densely rugosely punctured, with dense erect hair, of moderate length. Abdomen densely punctured at middle, with dense erect short hair; fifth segment granulate and densely hairy at middle, much as the fourth, a narrow transverse sulcus just behind apex; sixth segment longer than fifth, transversely flattened, at the centre of the segment and in the beginning of the apical third with two narrow tooth-like lobes projecting slightly towards the rear, one lobe on each side of the middle, the two separated by a deep concavity between their summits. Hind spurs free, one $\frac{3}{4}$ the length of other. Claws cleft, the inner tooth as long as the outer and twice as wide, with apex obliquely truncate, basal dilatation not evident. Length 11 mm. Width 5 mm.

The unique male *type* from GUATEMALA: Calderas, was taken by *G. C. Champion*, and is the specimen listed by Bates in *Biol. centr.-Amer.*, Coleopt. (II) **2**, as *Lachnosterna* species 80. Closest to *hirticollis* but abundantly distinct by the smaller size, rectangular hind thoracic angles, and male abdominal characters.

Lachnosterna lanepta sp. n.

Elongate-oval, castaneous, shining, entirely griseo-pilose above, with longer hairs intermixed on head, front half of thorax and basal area of elytra, the smaller hairs very fine,

silky, and suberect. Head and clypeus coarsely densely variolately punctured; clypeus with apex slightly reflexed, centre of apex very shallowly subemarginate, angles broadly rounded. Thorax very broadly roundly dilated at sides, margin straight, entire, ciliate; hind angles very evident but obtusely angulate, front angles obtuse; disc very densely, finely, rather uniformly punctured. Elytra very finely densely punctured. Pygidium flattened, subshining, densely finely punctured at base, rugose in apical $\frac{1}{3}$, with moderately long rather dense suberect hair. Abdomen subshining, widely shallowly concave, moderately densely setigerously punctured; fifth segment with a small area of fine granules at centre; sixth segment one half as long as fifth, strongly carinate at base, transversely shallowly sulcate at middle. Hind spurs long, free, one $\frac{3}{4}$ as long as other. Claws with median tooth slightly shorter and wider than apical one; basal dilatation from obtusely angulate to almost rectangular shape. Length 17 mm. Width 8 mm.

The unique male *type* is from GUATEMALA: Cubulco, Vera Paz (*G. C. Champion*), and is the specimen designated by Bates in the *Biol. centr.-Amer.* as number 78. This species is in a very complex and difficult group, in which the specific differences are slight; it is closest to *pallidicornis* and *pilosula*, but the longer antennal club and subrectangular hind thoracic angles will separate it. *L. lanepta* can also be distinguished from *rufotestacea* by the much larger size and the dense fine thoracic puncturation.

Lachnosterna freeborni sp. n.

Small, oblong-oval, testaceous, head and thorax rufotestaceous; shining. Head with front and clypeus densely variolately punctured, with long erect hairs; clypeus short, tumid at centre of base, apex slightly reflexed, centre of apex very narrowly rather deeply emarginate, angles broadly rounded. Antenna 10-segmented, club flavous, subequal to the entire stem. Thorax subangularly dilated at sides, margins entire and with very dense long silky cilia; hind angles obtusely angulate but quite evident, front angles obtusely rounded; disc moderately densely variolately punctured, with much smaller punctures intermixed and with very long erect silky hair. Elytra with a few scattered short hairs near apex and with several long suberect hairs near base. Pygidium evenly convex, rugosely rather finely punctured, with short erect hair. Abdomen polished, shallowly widely sulcate at centre, the sulcus much narrower on the fifth and sixth segments; fifth segment moderately densely punctured at centre; sixth as long as fifth, transversely impressed, moderately densely punctured at centre, with a narrow transverse carina in basal $\frac{1}{4}$, the carina interrupted at the middle. Hind spurs free, almost equal. Claws with middle tooth very close to apical one, slightly wider than the latter but not quite as long; basal dilatation separated only very slightly from the middle tooth and acutely angular, Length 10–10·5 mm. Width 5–5·5 mm.

The *holotype* and one *paratype*, both males, from MEXICO, taken by *Truqui* (Fry collection), are in the British Museum. Related to *collaris* Moser, but differs in the much longer male antennal club, in the more angulate hind thoracic angles and in the non-declivous fifth abdominal segment. From *subrugosa* the smaller size, colour, and male abdominal characters will readily separate it.

Lachnosterna nisuens sp. n.

Elongate-oval, rufocastaneous, shining, thorax nude, elytra seemingly so, but with a very few scattered fine hairs. Head with front and clypeus very coarsely cribrosely punctured, with long erect hairs; clypeus slightly tumid at middle of base, somewhat

emarginate at apex, angles very broadly rounded. Antennae rufocastaneous, 10-segmented. Thorax broadly roundly dilated at sides, margin almost entire, ciliate, front and hind angles very obtusely angulate, the latter evident, however; disc somewhat sparsely irregularly punctured, with moderately large punctures predominating, mixed with much smaller ones. Elytra moderately densely rugosely punctured. Pygidium nude, convex, highly polished, shallowly, fairly widely, longitudinally sulcate in apical half, moderately densely finely punctured; apex subtruncate, ciliate. Abdomen convex, polished, sparsely setigerously punctured, fifth segment with a large spot of transverse granules on and near middle, the apical $\frac{1}{3}$ suddenly declivious and turned back under itself very slightly; sixth segment as long as preceding, transversely flattened, very faintly longitudinally sulcate, with moderately dense granules at centre; apex slightly carinate, ciliate. Hind spurs free, equal in length, apices rounded. Claws with a strong acute median tooth, base very obtusely dilated. Length 18 mm. Width 8·5 mm.

The unique male *type* is from Mexico : Parada, and is the specimen called by Bates in *Biol. centr.-Amer.* number 71. It belongs in the *cribricollis* group and is closest to *collaris* Moser, but may be separated quickly from the latter by the much larger size, the male pygidium and the two sizes of thoracic punctures.

Lachnosterna ghentata sp. n.

Oblong-ovate, wider behind, shining, elytra rufotestaceous, head, thorax and legs dark rufous. Head with clypeus and front rather densely, not rugosely, punctured, with erect hair; clypeal margin very greatly reflexed especially at apex, the latter subtruncate, angles rounded, the side margin raised to place of juncture with eye, at which place they fall off suddenly, giving a very angulate appearance. The 10-segmented antennae are rufoflavous, club flavous and greatly elongated, being $\frac{1}{3}$ longer than the entire stem and slightly curved. Thorax with much-rounded dilatations at sides, margins slightly sinuate behind, margin simple, front angles obtuse, hind angles very distinctly rectangular; disc closely densely punctured, with many short suberect hairs and intermixed longer ones, the punctures coarser and sparser at sides. Elytra coarsely rugose, with many very short *scarcely evident* hairs. Pygidium convex, polished, sparsely variolately punctured, with moderate-sized erect hair, apex ciliate. Abdomen flattened at centre, fifth segment with granulate spot at middle; sixth segment slightly shorter than preceding, transversely flattened, with erect hairs. Hind spurs free, one $\frac{3}{4}$ length of other. Claws rather like those of *Listrochelus*, with a very small acute tooth slightly above the middle, and between the tooth and the very slight basal dilatation with minute serrations. Length 15 mm. Width 8 mm.

The unique male *type* is from Mexico : Guajuco, Nuevo Leon (*Dr. Palmer*), and is the specimen mentioned in *Biol. centr.-Amer.* by Bates as number 64. While it is very closely related to *magnicornis* in most characters, the rectangular instead of obtuse hind thoracic angles and the non-sulcate sixth ventral will separate the present species.

THRIPS MAREOTICUS PRIESNER, WITH A REVISED DEFINITION OF THE GENUS *STENOTHRIPS* UZEL (THYSANOPTERA: TEREBRANTIA)

By E. R. Speyer, M.A., F.R.E.S.

(*Entomologist: Experimental Station, Cheshunt, Herts.*)

In a previous paper "Some species of the genus *Thrips* from French Morocco" (Speyer, 1935) allusion was made to, and a structural description given of a species which was at the time identified as *Thrips tenuisetosus* Knechtel. Dr. Priesner, to whom a specimen was submitted unfortunately only after publication of the paper referred to, has rightly pointed out to me that the insect in question does not belong to this species, but is identical with *Thrips mareoticus* Pr. (= *T. quadrisetosus* Hood).

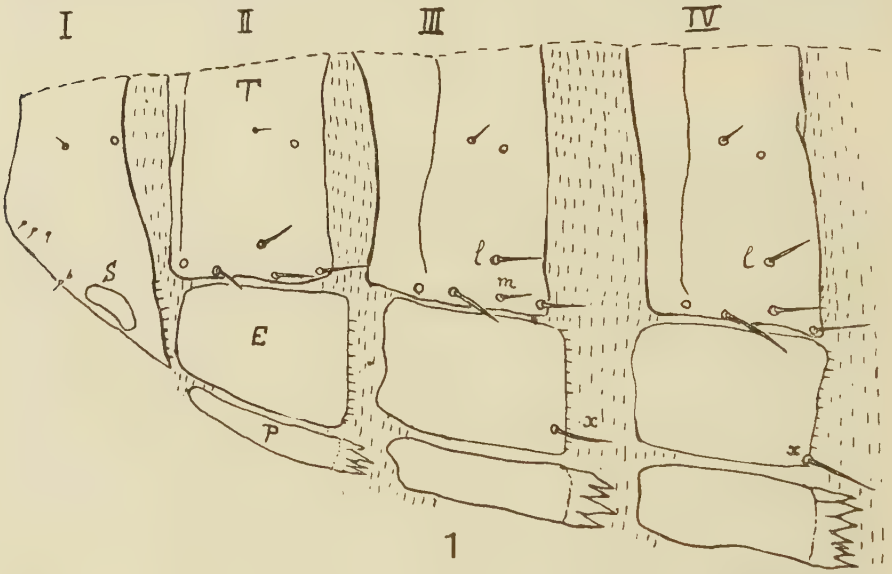


Fig. 1.—*Thrips mareoticus* Pr. ♀ × 350. Sclerites of the 1st to 4th abdominal segments. viewed from the left side. *E*, epipleurite. *P*, pleurite. *S*, spiracle. *T*, tergite, *l*, lateral seta of tergite. *m*, marginal setae of tergite. *x*, seta on epipleurite.

My error in identification arose in part from comparison of the Moroccan insects with specimens which had been labelled "*T. tenuisetosus* Kn." in the British Museum (Natural History) collection by Dr. R. S. Bagnall (*see* Bagnall 1934 : 493). Having re-examined the two slides upon which the latter specimens, from Montargis, France, are mounted, I conclude that the 13 brachypterous females belong to the species *T. angusticeps* Uzel and the single macropterous female to the species *T. tabaci* Lind.

Dr. Priesner has been so kind as to send me co-type specimens of *T. tenuisetosus* Kn., and it is quite clear that neither the specimens referred to this species by Dr. Bagnall nor the specimens which I received from Morocco, belong to the latter.

The structural description of the female imago given by me (Speyer, 1935 : 5–6, figs. 2, 4, 6 and 8) refers therefore to *T. marcoticus* Pr., and *not* to *T. tenuisetosus* Kn.

It so happens that Dr. J. D. Hood described *T. mareoticus* Pr. under the name *T. quadrisetosus* (Hood, 1932 : 124–126) in the same journal of the same year as that in which Dr. Priesner's description of "*Stenothrips mareoticus*" was published (Priesner, 1932 : 10–12). As the latter description precedes the former, the specific name *mareoticus* Pr. must unquestionably receive priority. The insect was assigned to the genus *Stenothrips* on account of the fact that the type specimen possessed maxillary palpi composed of 2 joints only.

Dr. Priesner also sent me not only a number of female imagines from Egypt, with two male and several female imagines from Cyprus, but also Hood's paratype specimen of *T. quadrisetosus*. From these it has been possible to ascertain that the occurrence of specimens with 2-jointed maxillary palpi is exceptional. The insect, together with *T. tenuisetosus* Kn., possesses a characteristic of the abdominal chaetotaxy in which it shows some slight affinity to *S. graminum* Uzel, the genotype of the genus *Stenothrips*, further reference to which will be made hereafter.

With the additional material which, through the kindness of Dr. Priesner, it has been possible to examine, a more comprehensive description relating to the diagnostic characters of *T. mareoticus* Pr. can now be presented, from which it will become apparent that this insect is *not* closely related to *T. angusticeps* Uzel.

For general descriptions of *T. mareoticus* Pr., reference should be made to the publications, cited in the following synonymy, of Priesner and Hood, the latter of which is accompanied by very beautiful illustrations.

Thrips mareoticus Priesner.

Synonymy.

mareoticus (*Stenothrips*) Priesner, 1932, *Bull. Soc. ent. Egypt*, **16** : 10–12, fig. 5.
quadrisetosus Hood, 1932, *Ibid.*, **16** : 124–6, pl. iv, figs. 1–5.
tenuisetosus Speyer, 1935, *Bull. Soc. Sci. nat. Morocco*, **15** : 1–7, figs 2, 4, 6, 8.

Diagnostic Characters.

Female Imago. Length about 1·0 mm. Length of antenna about 0·2 mm. General colour yellowish-brown to dark brown. *Head :* slightly broader than long, sides nearly parallel behind the eyes. Ocelli clear, partially surrounded by crescents of red pigment. Post-ocular setae of each side in line, and nearly equidistant from one another. *Prothorax.* Setae at posterior lateral angles short (about 40 μ). Pronotum lightly sculptured with transverse striae, which are very indistinct in the median region. *Fore-wing* rather short, faintly shaded with yellow : costal setae about 24; fore-vein, 4 + 3 setae proximally, 3 setae distally : hind-vein with some 10 setae. *Abdomen.* Not unusually broad. 2nd tergite (fig. 1) : along the lateral margin of each side, 3 setae with an anteriorly placed seta-pit. 3rd tergite (fig. 1) : the setae (*m*) along each lateral margin in line, not placed as at the corners of a triangle as in the genotype *T. physapus* L. (fig. 2) : the lateral seta (fig. 1 *l*) of each side placed nearer to the lateral margin than in the genotype (fig. 2 *l*). The arrangement of setae upon the 4th tergite is somewhat similar, but does not differ to so marked a degree from that of the genotype. 8th tergite (*see* Speyer, 1935, fig. 4) : across the posterior margin a complete fringe of relatively few and long (about 15 μ) setae, arranged at regular intervals. The bases of the setae are broad and sometimes coalesce. 9th tergite : with an anterior and a posterior pair of seta-pits, and setae arranged as in the

genotype (*T. physapus* L.). Epipleurites (fig. 1) devoid of intermarginal setae : upon each epipleurite of the 3rd and 4th segments, the seta (*x*) upon the posterior margin is placed nearer to the adjoining pleurite than in the genotype (fig. 2 *x*). 1st sternite : across the anterior margin, 3 to as many as 6 minute setae (*see* Speyer, 1935, fig. 8). 2nd sternite : devoid (with rare exceptions) of intermarginal setae (*see* Speyer, 1935, fig. 8). 3rd to 6th sternites : beset each with a single but irregular row of intermarginal setae (*see* Speyer, 1935, fig. 8). 7th sternite : with an anteriorly placed seta-pit on each side, but *devoid* of intermarginal setae.

Male Imago (figs. 3 and 4). Length about 0·9 mm. Length antenna about 0·19 mm. : General colour and proportions as in the female. Colour of antennal joints : 1 yellow, 2 yellow, pale distally, 3 pale, yellow distally, 4 yellow, 5–7 light brownish yellow. Chaetotaxy of prothorax, tergites and epipleurites of the 2nd to 4th, and sternites of the 1st to 6th abdominal segments as in the female, but the intermarginal setae upon the latter are less numerous (fig. 4). *Abdomen.* 8th tergite (fig. 3) : a narrow fringe of from 4 to 6 setae, which resemble those of the female, confined to the median region only across the posterior margin. 9th tergite (fig. 3) : an anterior (lateral) and posterior (median) pair of seta-pits present : in the median region a pair of short setae : across the posterior region a curved row of 4 rather stout setae, each about 25 μ long. 7th (fig. 4) and 8th sternites : beset with intermarginal setae (*cf.* the absence of these in the female). Translucent depressions (fig. 4), small, elliptical and rather narrow transversely are present upon the 3rd to 6th abdominal sternites (inclusive) only.

Habitat and distribution.

In flowers of *Achillea santolina*, *Calendula*, *Chrysanthemum coronarium* and *segetum* and occasionally of Orange.

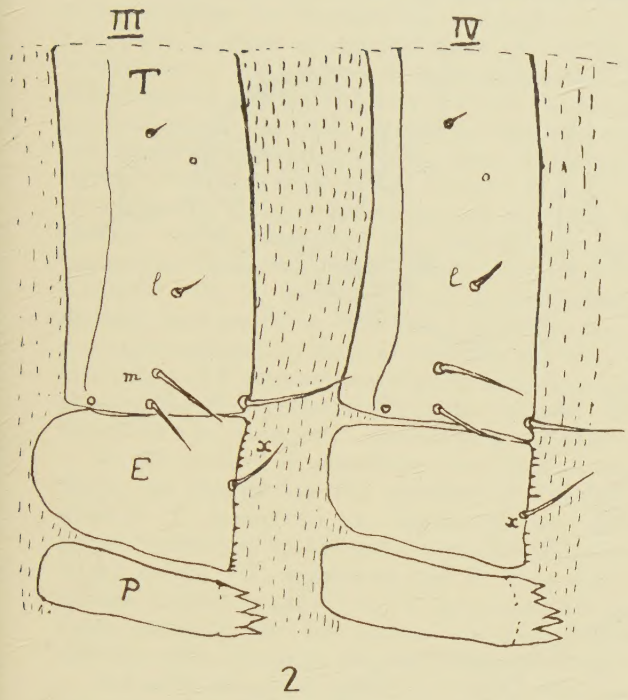
French Morocco, Egypt, Cyprus, and Palestine.

The specimens from which Dr. Hood made his description, under the name *T. quadrisetosus*, were collected by *Dr. C. B. Williams* in Egypt on 23.iii.1925.

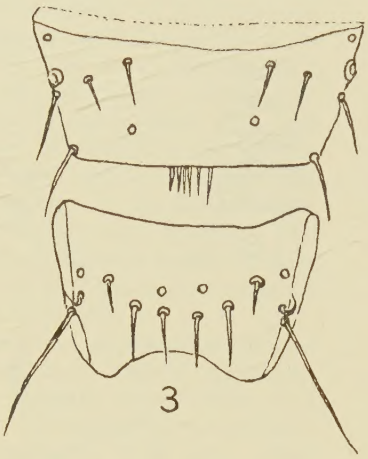
Dr. Priesner has pointed out to me the differences between the female imago of *T. mareoticus* and that of *T. tenuisetosus* Knechtel, the latter collected from cruciferous flowers at Chisinau, Rumania, and described by Knechtel in 1923. These differences I confirm from specimens of the latter insect (collected by Knechtel) which Dr. Priesner sent to me. *T. tenuisetosus* appears to be a larger species, the antennae about 0·26 mm. in length, and the width of the head about 0·13 mm. The most important structural difference lies in the entire absence, in *T. tenuisetosus*, of intermarginal setae from the abdominal sternites. In both species the number of joints of which the maxillary palpi are composed varies from 2 to 3, the latter number being more prevalent.

The characteristic arrangement of setae upon the tergites and epipleurites of the 2nd, and to some extent also of the 3rd abdominal segment (*see* fig. 1), which differs from that obtaining in most other species of the genus *Thrips* (*see* fig. 2), as well as of other Thripoidean genera, is not only common to *T. mareoticus* and *T. tenuisetosus*, but also to *Stenothrips graminum* Uzel, the only species of the latter genus which appears as yet to have been described.

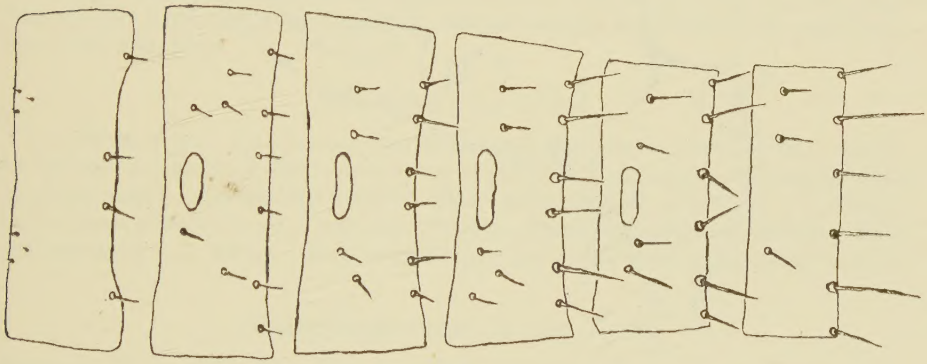
This character is admittedly a small one, but when the structural characteristics of Thysanoptera have been studied and described in greater detail, it may serve a useful purpose in the dividing up, for convenience sake, of the genus *Thrips* which is at present unwieldy from the number of species which it contains.



2



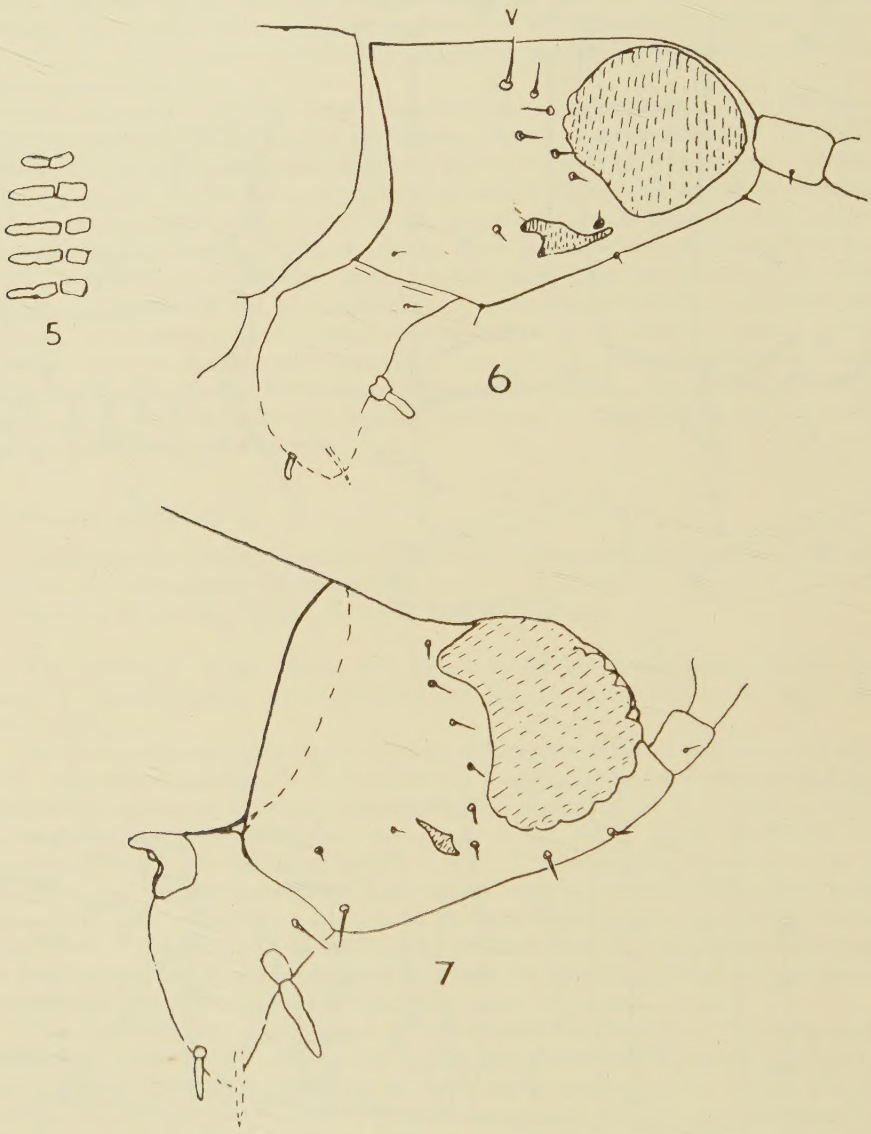
3



4

FIGS. 2–4.—(2) *Thrips* (*fuscipennis* Hal.). ♀ × 350. Sclerites of the 3rd and 4th abdominal segments, viewed from the left side. For comparison with fig. 1. Lettering as in fig. 1. (3) *Thrips mareoticus* Pr. ♂ × 375. Tergites of 8th and 9th abdominal segments. (4) *Thrips mareoticus* Pr. ♂ × 375. Sternites of the 2nd to 7th abdominal segments.

Through the kindness of Mr. F. Laing, I have been able to examine a number of imagines of *Stenothrips graminum* Uzel, and I find that the maxillary palpi appear to be constantly two-jointed: their length, however, is extremely variable,



Figs. 5–7.—(5) *Stenothrips graminum* Uzel. ♀ × 350. Maxillary palpus from 5 specimens, showing variation in length, and approach to a 3-jointed condition. (6) *Stenothrips graminum* Uzel. ♀ × 350. Head viewed from the right side. *V*, seta upon the vertex, not represented in *Thrips*. (7) *Thrips tenuisetosus* Knechtel. ♀ × 375. Head viewed from the right side.

and a constriction in the distal joint occurs not infrequently and causes a close approximation to the three-jointed condition (fig. 5). Dr. Priesner points out to me, and I confirm his observation, that *S. graminum* (fig. 6) differs from all

species of *Thrips*, including *T. mareoticus* and *T. tenuisetosus* (fig. 7) in the shape and chaetotaxy of the head. In *S. graminum* the head is longer, narrower, and flattened dorso-ventrally : the post-ocular setae are arranged in a very irregular row on each side, and posteriorly to them, a pair and sometimes two pairs of setae are present upon the vertex (fig. 6 *v*). *Stenothrips* Uzel is therefore a valid genus, in spite of the fact that his separation of it from *Thrips* on the number of joints of which the maxillary palpi are composed does not hold good. As in *T. tenuisetosus* the abdominal sternites of *S. graminum* are devoid of intermarginal setae, and the 1st abdominal sternite appears to be devoid of minute setae at the anterior margin. An important characteristic to which Dr. Priesner has called my attention is the sculpturing of the prothorax : in *S. graminum* the pronotum is distinctly sculptured with fine transverse striae, which run closely parallel to one another but are seldom confluent. In *T. mareoticus* and *T. tenuisetosus* these striae are much less distinct, and are often obliterated in the median region : in the anterior and posterior regions they form an irregular net-work with very large meshes. The fore-wings of *S. graminum* are much longer and proportionately narrower than those of the two species of *Thrips* mentioned. Those of *S. graminum* measure about 0·8 mm., those of *T. mareoticus* about 0·6 mm. in length.

In the male of *S. graminum* very distinct translucent depressions of oval shape are present on the sternites of the 3rd to 7th abdominal segments, while in *T. mareoticus* the depressions are more elongate transversely, and present only upon the 3rd to 6th segments inclusive. The male of *T. tenuisetosus* is not known. *T. mareoticus* and *T. tenuisetosus*, probably with some allied species, cannot be placed in the genus *Stenothrips*, but when more is known of these insects, it may be possible to include them in a new genus which shows affinities with *Thrips* on the one hand and *Stenothrips* on the other.

Attention should be called to sexual dimorphism relating to intermarginal setae upon the 7th abdominal sternite of *T. mareoticus* : these setae are present in this position in the male and absent in the female. Such dimorphism is extremely rare at least amongst species of *Thrips*.

In conclusion I consider it advisable to give a revised definition of the genus *Stenothrips*, from the more important characteristics exhibited by *S. graminum* Uzel, the genotype.

Stenothrips Uzel, emend.

Of slender shape : head narrow, depressed, longer than broad : antennae as in *Thrips*. On the vertex, posterior to the transverse row of post-ocular setae, one or two pairs of setae. Maxillary palpi 2- or indistinctly 3-jointed : labial palpi 2-jointed, as in *Thrips*. *Prothorax* : at the lateral posterior angle of each side, two setae of greater length than other setae upon the pronotum, as in *Thrips*. Fore-wings comparatively long and proportionately narrow.

References cited in the Text.

Bagnall, R. S., 1934, *Ann. Mag. nat. Hist.*, (10) **14** : 483.
Hood, J. D., 1932, *Bull. Soc. R. ent. Egypte*, **16** : 124–6, pl. iv, figs. 1–5.
Priesner, H., *Ibid.*, **16** : 10–12, fig. 5.
Speyer, E. R., 1935, *Bull. Soc. Sci. nat. Maroc*, **15** : 1–7, figs. 2, 4, 6, 8.

ANNOUNCEMENT.

PUBLISHED 26TH FEBRUARY, 1937.

HÜBNER: A BIBLIOGRAPHICAL AND SYSTEMATIC ACCOUNT OF THE ENTOMOLOGICAL WORKS OF JACOB HÜBNER AND OF THE SUPPLEMENTS THERETO BY C. GEYER, G. F. VON FRÖLICH, AND G. A. W. HERRICH-SCHÄFFER.

By Francis Hemming.

In 2 volumes 4to. bound. Vol. 1—605 pp. £1 15*s.* 0*d.*
Vol. 2—275 pp. 15*s.* 0*d.*

This work contains a sketch of the life of Hübner, together with a portrait, a study of Hübner's views on the classification of the Lepidoptera, notes on the surviving manuscripts of Hübner and Geyer, and the present location of the original drawings. A detailed study of each of Hübner's works together with indices to the species dealt with, conclusive evidence of the dates of publication of the various parts of each work, and transcripts of many of the unpublished manuscripts by Hübner, especially those relating to the *Sammlung exotischer Schmetterlinge* are given. The work is completed by a list of the generic names employed by Hübner and Geyer and a catalogue of the published material relating to the works of Hübner.

Included in the two volumes are over one hundred facsimiles, comprising the whole of the known text of the *Sammlung exotischer Schmetterlinge*, a facsimile of the *Tentamen*, *Lepidopterologische Zuträge*, *Index exoticorum Lepidopterorum*, and other unique works.

Orders should be addressed to :—

The Registrar,
Royal Entomological Society of London,
41, Queen's Gate,
London, S.W. 7.